**Design a Building Worksheet**

Constraints:

* Must not go over $20 budget.
* Building must be 30 cm tall.
* Building must sit within a 30 cm by 30 cm square

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| **The Problem (Ask)** |
| What problem are we trying to solve? |

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| **Research Notes (Research)** |
| Write down what you learn about materials that absorb sound. |

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| **Brainstorming Notes (Imagine)** |
| Write down ideas for your building design. |

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| Material | Cost |
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Final Cost: $\_\_\_\_\_\_\_\_\_\_\_

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| **Your Design (Plan)** |
| Draw a picture of your what your building will look like with arrows identifying and labeling each material. |

What materials did you use? Why did you choose those? (Create)

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Record how many decibels are measured inside of your building each time you test. (Test)

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| Test Number | Decibels measured inside building |
| 1 |  |
| 2 |  |
| 3 |  |

After you test your design, what will you change? Are there different materials you are going to use? (Improve)

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Record how many decibels are measured inside of your redesigned building.

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| Test Number | Decibels measured inside building |
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| 2 |  |
| 3 |  |

What worked with this redesign? What would you change? (Improve)

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Which materials absorbed the loud sound the best?

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Which materials absorbed the loud sound the worst?

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